20STTO"thEOShOOT

FIG. 1

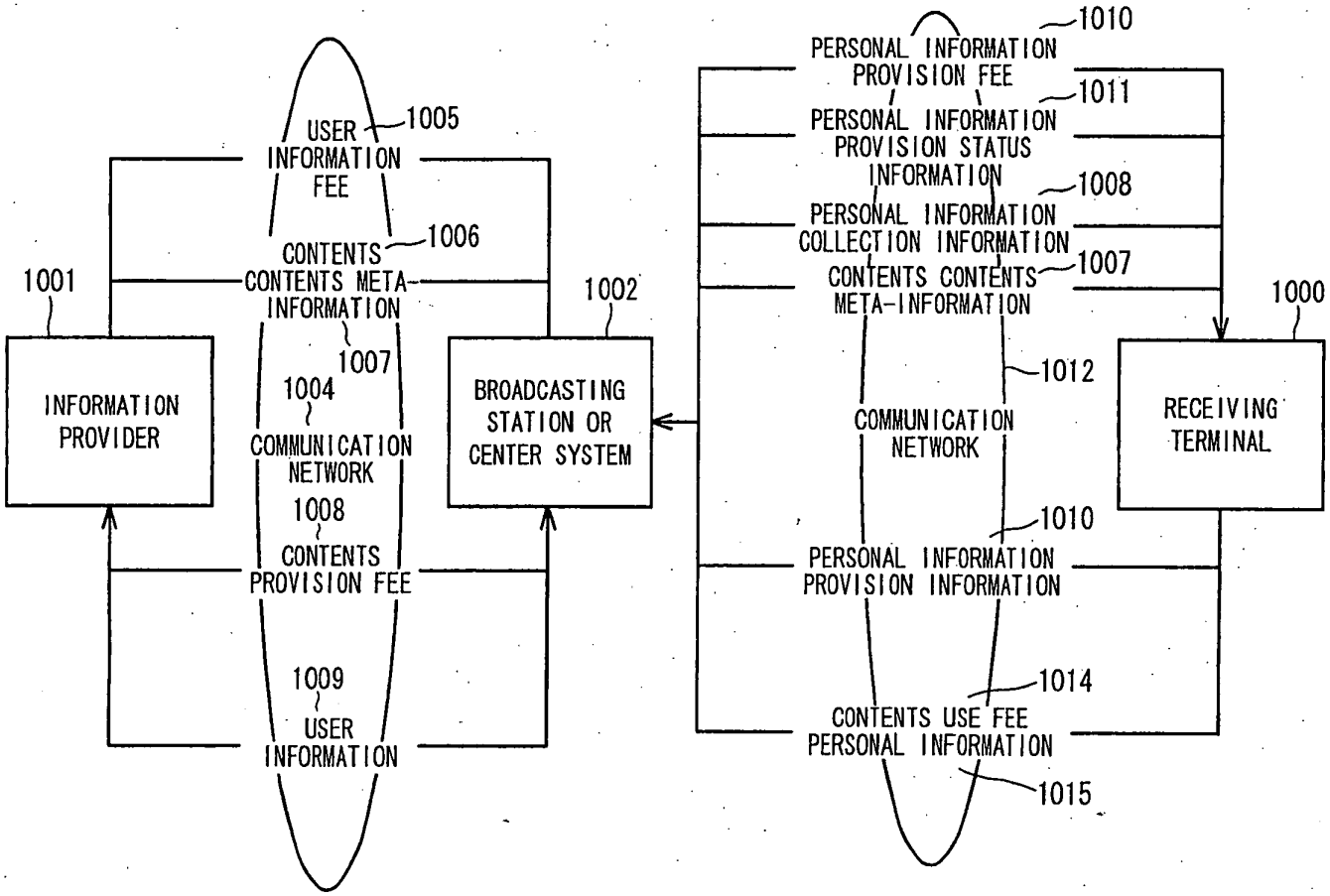
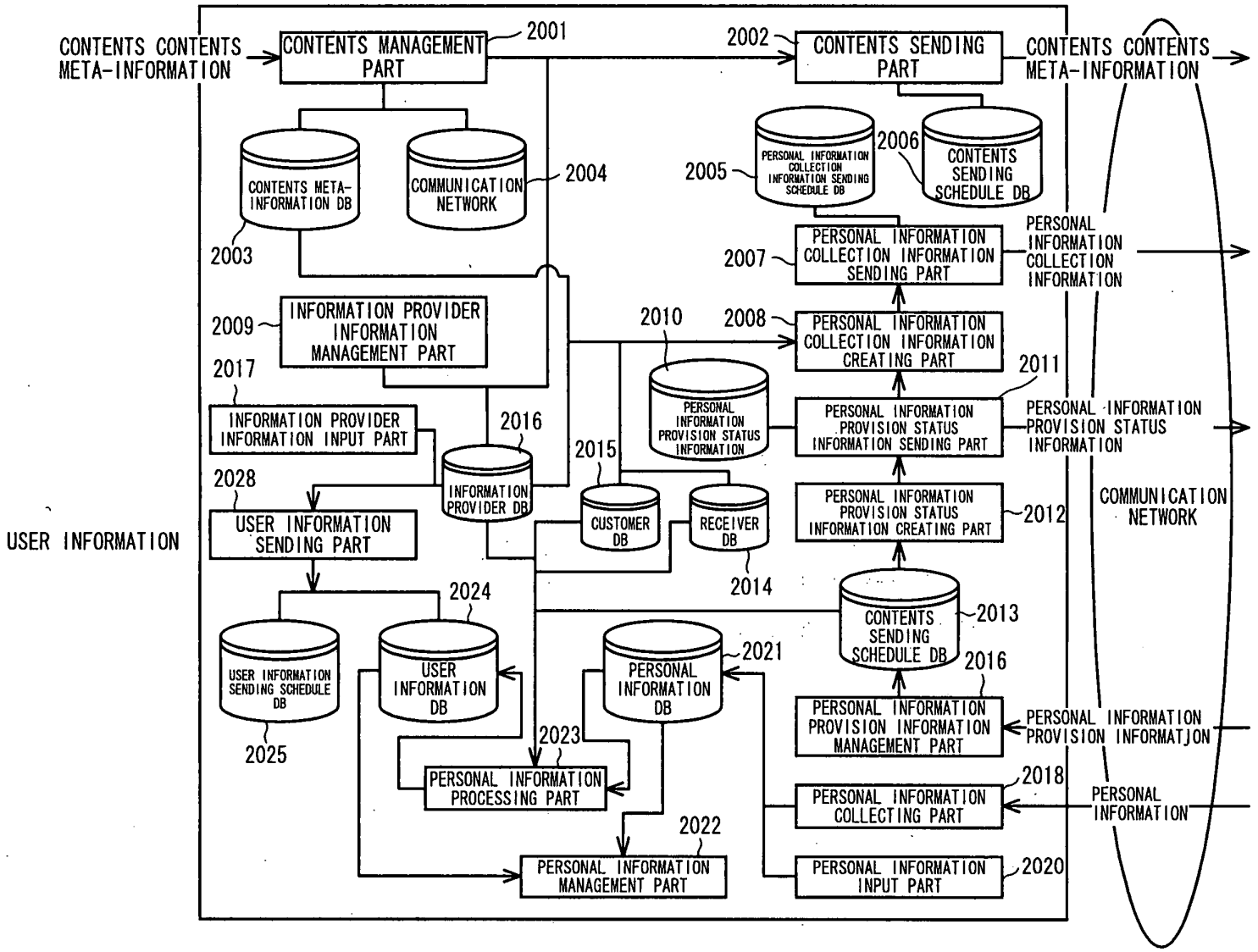


FIG. 2


CONTENTS CONTENTS META-INFORMATION
CONTENTS MANAGEMENT PART
2001
2002
CONTENTS SENDING PART
CONTENTS CONTENTS META-INFORMATION
CONTENTS META-INFORMATION DB
COMMUNICATION NETWORK
2004
2003
PERSONAL INFORMATION COLLECTION INFORMATION SENDING SCHEDULE DB
2005
2006
CONTENTS SENDING SCHEDULE DB
PERSONAL INFORMATION COLLECTION INFORMATION SENDING PART
2007
PERSONAL INFORMATION COLLECTION INFORMATION
2009
INFORMATION PROVIDER INFORMATION MANAGEMENT PART
2010
2008
PERSONAL INFORMATION COLLECTION INFORMATION CREATING PART
2017
INFORMATION PROVIDER INFORMATION INPUT PART
2016
PERSONAL INFORMATION PROVISION STATUS INFORMATION
2011
PERSONAL INFORMATION PROVISION STATUS INFORMATION SENDING PART
PERSONAL INFORMATION PROVISION STATUS INFORMATION
2028
2015
INFORMATION PROVIDER DB
CUSTOMER DB
RECEIVER DB
2014
PERSONAL INFORMATION PROVISION STATUS INFORMATION CREATING PART
2012
COMMUNICATION NETWORK
USER INFORMATION
USER INFORMATION SENDING PART
2024
CONTENTS SENDING SCHEDULE DB
2013
2021
2016
USER INFORMATION SENDING SCHEDULE DB
USER INFORMATION DB
PERSONAL INFORMATION DB
PERSONAL INFORMATION PROVISION INFORMATION MANAGEMENT PART
PERSONAL INFORMATION PROVISION INFORMATION
2025
2023
PERSONAL INFORMATION PROCESSING PART
2018
PERSONAL INFORMATION COLLECTING PART
PERSONAL INFORMATION
2022
PERSONAL INFORMATION MANAGEMENT PART
PERSONAL INFORMATION INPUT PART
2020

2057T0 "hE05h00T

FIG. 3

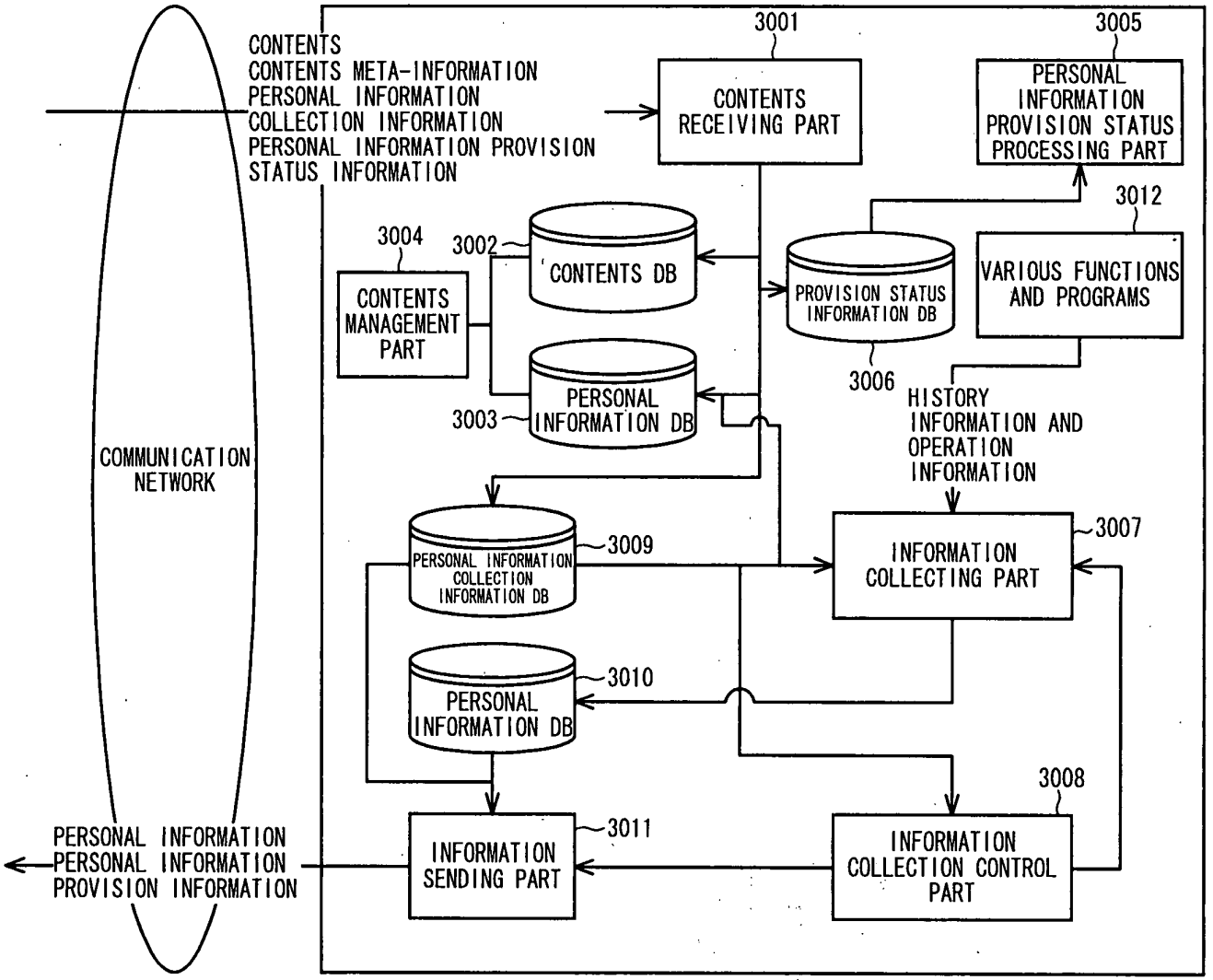


FIG. 4

| ATTRIBUTE NAME | ATTRIBUTE VALUE |
|---|---|
| CONTENTS ID | C00001 |
| STORAGE LOCATION | c:¥contents¥C00001 |
| CONTENTS META INFORMATION ID | M00001 |

EXAMPLE OF EMBODYING A CONTENTS DB

2054502.4504.0

2001-150502 JP 2001-150502

# FIG. 5

| ATTRIBUTE NAME | ATTRIBUTE VALUE | |
|---|---|---|
| CONTENTS ID | C00001 | |
| CONTENTS NAME | STORAGE CONTENTS A00001 | |
| CONTENTS META INFORMATION ID | M00001 | |
| CONTENTS SIZE | 10Kbyte | |
| CONTENTS VALIDATING START TIME | 2001/01/01 13:00 | |
| CONTENTS VALIDATING END TIME | 2001/01/31 13:00 | |
| CONTENTS DISCARD TIME | 2001/02/01 | |
| CONTENTS SENDING START TIME | 2000/12/30 14:00 | NOT REQUIRED WITH RECEIVER |
| CONTENTS SENDING END TIME | 2000/01/01 13:00 | |
| CONTENTS TARGET USER | OVER 20 YEARS OF AGE | |
| HISTORY TARGET USER | OVER 20 YEARS OF AGE | |
| GENRE | SPORTS NEWS | |
| CONTENTS DESCRIPTION | PROFESSIONAL BASEBALL MEMBER LIST | |
| STORAGE LOCATION IN RECEIVER | DEPENDENT ON TERMINAL | |
| STORAGE METHOD IN RECEIVER | DEPENDENT ON TERMINAL | |
| COPYRIGHT INFORMATION | PRESENT | |
| COPYRIGHT HOLDER | "A" SPORTS PUBLISHING COMPANY | |
| CONTENTS PROVIDER | "A" SPORTS PUBLISHING COMPANY | |

EXAMPLE OF EMBODYING A CONTENTS META-INFORMATION DB

# FIG. 6

| ATTRIBUTE NAME | ATTRIBUTE VALUE |
|---|---|
| SCHEDULE ID | S00001 |
| SENDING START TIME | 2001/01/01 13:00 |
| SENDING END TIME | 2001/01/01 13:05 |
| BANDWIDTH | 1Kbyte |
| REPETITION COUNT | THREE TIMES OR MORE |
| TARGET CONTENTS | CONTENTS OF "A" SPORTS PUBLISHING COMPANY |
| NETWORK ID | 0x01 |
| TRANSPONDER ID | 0x02 |
| CANNEL ID | 0x03 |

EXAMPLE OF EMBODYING A CONTENTS SENDING SCHEDULE DB 2006

EP 0 450 854 A2

FIG. 7

| ATTRIBUTE NAME | ATTRIBUTE VALUE |
|---|---|
| SCHEDULE ID | C00001 |
| SENDING START TIME | 2001/01/01 13:05 |
| SENDING END TIME | 2001/01/01 13:10 |
| BANDWIDTH | 0.5Mbps |
| REPETITION COUNT | THREE TIMES OR MORE |
| TARGET CONTENTS | PERSONAL INFORMATION COLLECTION INFORMATION OF CONTENTS OF "A" SPORTS PUBLISHING COMPANY |
| NETWORK ID | 0x01 |
| TRANSPONDER ID | 0x02 |
| CHANNEL ID | 0x03 |

EXAMPLE OF EMBODYING A PERSONAL INFORMATION COLLECTION INFORMATION SENDING SCHEDULE DB 2005

# FIG. 8

| ATTRIBUTE NAME | ATTRIBUTE VALUE |
|---|---|
| SCHEDULE ID | CS00001 |
| SENDING START TIME | 2001/01/01 13:15 |
| SENDING END TIME | 2001/01/01 13:20 |
| BANDWIDTH | 0.5Mbps |
| REPETITION COUNT | THREE TIMES OR MORE |
| TARGET CONTENTS | USER CATEGORY (HOKKAIDO REGION) |
| NETWORK ID | 0x01 |
| TRANSPONDER ID | 0x02 |
| CHANNEL ID | 0x03 |

PERSONAL INFORMATION PROVISION
INFORMATION SENDING SCHEDULE DB.2010

2957-10-4594-0150-2057

# FIG. 9

| ATTRIBUTE NAME | ATTRIBUTE VALUE |
|---|---|
| SCHEDULE ID | PS00001 |
| SENDING START TIME | 2001/01/01 13:15 |
| SENDING DESTINATION IP ADDRESS | 202.202.2.168 |
| SENDING CONTENTS (USER INFORMATION ID) | UI0001 |

USER INFORMATION SENDING SCHEDULE DB 2025

EPO - DG 1 - 07.10.2004 - 14:50:52

FIG. 10

| DATA STRUCTURE | BIT LENGTH |
|---|---|
| View_log_set_request | |
| Format_Version | 8 |
| Log_Activation_Time | 40 |
| Log_Expire_Time | 40 |
| Report_Send_Time | 40 |
| Log_Limit_Size | 32 |
| Threshold_of_Capacity | 8 |
| Target_Content_Number | 16 |
| for( i = 0 ; i < Target_Content_Number ; i++ ) { | |
| Type_of_Match | 1 |
| Kind_of_Match | 3 |
| Reserved | 4 |
| Uri_Length | 16 |
| for( j = 0 ; j < Uri_Length ; j++ ) { | |
| text_char | 8 |
| } | |
| } | |
| Signature_length | 16 |
| if(Signature_length != 0x0000) { | |
| Signature_alogorithm | 16 |
| for( j = 0 ; j < Signature_length ; j++ ) { | |
| signature_byte | 8 |
| } | |
| } | |

FIG. 11

| DATA STRUCTURE | BIT LENGTH |
|---|---|
| View_log_set_request | |
| Format_Version | 8 |
| Log_Activation_Time | 40 |
| Log_Expire_Time | 40 |
| Report_Send_Time | 40 |
| Log_Limit_Size | 32 |
| Threshold_of_Capacity | 8 |
| Before_Data | 8 |
| After_Data | 8 |
| Target_Content_Number | 16 |
| for( i = 0 ; i < Target_Content_Number ; i++ ) { | |
| Type_of_Match | 1 |
| Kind_of_Match | 3 |
| Reserved | 4 |
| Uri_Length | 16 |
| for( j = 0 ; j < Uri_Length ; j++ ) { | |
| text_char | 8 |
| } | |
| } | |
| Signature_length | 16 |
| if(Signature_length != 0x0000) { | |
| Signature_alogorithm | 16 |
| for( j = 0 ; j < Signature_length ; j++ ) { | |
| signature_byte | 8 |
| } | |
| } | |

20070704150734

# FIG. 12

| DATA STRUCTURE | BIT LENGTH | BIT STRING NOTATION |
|---|---|---|
| View_log_set_request() { | | |
| command_id | 16 | uimsbf |
| command_length | 32 | uimsbf |
| viewlog_serial_number | 16 | uimsbf |
| viewlog_control_bit | 1 | bslbf |
| Reserved | 7 | bslbf |
| if(VIEWING HISTORY START INDICATION ) { | | |
| start_JST | 40 | bslbf |
| end_JST | 40 | bslbf |
| num_targets | 16 | uimsbf |
| for (i=0; i<num_targets; i++) { | | |
| match_condition | 4 | bslbf |
| reserved_future_use | 4 | bslbf |
| uri_length | 16 | uimsbf |
| for (j=0; j<uri_length; j++) { | | |
| uri_text_ch | 8 | uimsbf |
| } | | |
| } | | |
| num_untargets | 16 | uimsbf |
| for (i=0; i<num_untargets; i++) { | | |
| match_condition | 4 | bslbf |
| reserved_future_use | 4 | bslbf |
| uri_length | 16 | uimsbf |
| for( j=0; j<uri_length; j++) { | | |
| uri_text_ch | 8 | uimsbf |
| } | | |
| } | | |
| } | | |
| } | | |

2054502 - 0450405

FIG. 13

GENERAL FORMAT

| | | | |
|---|---|---|---|
| TIME INFORMATION | 40 | bit | |
| IDENTIFICATION NUMBER | 8 | bit | |
| LOG LEVEL | 8 | bit | |
| DATA LENGTH | 16 | bit | BYTE COUNT OF FOLLOWING DATA |
| DATA | | byte | LENGTH SPECIFIED IN DATA LENGTH |

2057F0"hE05h00T

FIG. 14

| | | | |
|---|---|---|---|
| TIME INFORMATION | 40 | bit | |
| IDENTIFICATION NUMBER | 8 | bit | FIXED |
| LOG LEVEL | 8 | bit | FIXED |
| DATA LENGTH | 16 | bit | FIXED (140) |
| Last turning channel(Network ID) | 16 | bit | |
| Last turning channel(TS ID) | 16 | bit | |
| Last turning channel(Service ID) | 16 | bit | |
| USER IDENTIFICATION NUMBER | 8 | bit | |
| URL | 128 | Byte | |
| Modify Time | 40 | bit | |

FIG. 15

| | | | |
|---|---|---|---|
| TIME INFORMATION | 40 | bit | |
| IDENTIFICATION NUMBER | 8 | bit | FIXED |
| LOG LEVEL | 8 | bit | FIXED |
| DATA LENGTH | 16 | bit | BYTE LENGTH OF FOLLOWING DATA |
| SYSTEM IDENTIFICATION NUMBER | 8 | bit | |
| MESSAGE LENGTH | 16 | bit | BYTE LENGTH OF FOLLOWING DATA |
| MESSAGE | | Byte | |

2057T0"tE05h00T

FIG. 16

| | | | |
|---|---|---|---|
| TIME INFORMATION | 40 | bit | |
| IDENTIFICATION NUMBER | 8 | bit | FIXED |
| LOG LEVEL | 8 | bit | FIXED |
| DATA LENGTH | 16 | bit | BYTE LENGTH OF FOLLOWING DATA |
| SYSTEM IDENTIFICATION NUMBER | 8 | bit | |
| MESSAGE LENGTH | 16 | bit | BYTE LENGTH OF FOLLOWING DATA |
| REMOTE CONTROL OPERATIONS | | Byte | |

# FIG. 17

| DATA STRUCTURE | BIT LENGTH | BIT STRING NOTATION |
|---|---|---|
| ViewLog0 { | | |
| view_log_status | 16 | uimsbf |
| report_terminal_item_number | 32 | uimsbf |
| for (i=0;i<report_terminal_item_number;i++){ | | |
| user_id | 8 | uimsbf |
| record_time_ JST | 40 | bslfb |
| target_category | 8 | uimsbf |
| if(target_category is contents reference){ | | |
| target_text_length | 16 | uimsbf |
| for(j=0;j<tartget_text_length;j++){ | | |
| target_text_oh | 8 | uimsbf |
| } | | |
| if(contents storing update time are referred to){ | | |
| modify_time_JST | 40 | bslbf |
| } | | |
| }else if(viewing history start instruction is updated) | | |
| viewlog_serial_number | 16 | uimsbf |
| } | | |
| referer_category | 8 | uimsbf |
| if(referer category is contents reference){ | | |
| referer_length | 16 | uimsbf |
| for(j=0;j<referer_length;j++){ | | |
| referer_text_ch | 8 | uimsbf |
| } | | |
| }else if(referer category is electronic mail){ | | |
| referer_message_id_length | 8 | uimsbf |
| for(j=0;j<referer_message_id_length+j++){ | | |
| referer_message_id_text_ch | 8 | uimsbf |
| } | | |
| } | | |
| } | | |

US 2005/0144505 A1

# FIG. 18

| ATTRIBUTE NAME | ATTRIBUTE VALUE |
|---|---|
| CUSTOMER ID | U00001 |
| CONTRACT DATE | 2001/01/01 |
| SERVICE PROVISION START DATE | 2001/01/01 |
| CONTRACTOR NAME | TARO TANAKA |
| ZIP CODE | 111-0011 |
| ADDRESS | 1-1-1, EDO, EDOGAWA-KU, TOKYO |
| TELEPHONE NO. | 03-333-3333 |
| FAMILY STRUCTURE | COUPLE AND CHILD |
| NUMBER OF FAMILY CUSTOMER ID | 3 |
| FAMILY CUSTOMER ID | U00001-01 |
| FAMILY CUSTOMER ID | U00001-02 |
| FAMILY CUSTOMER ID | U00001-03 |
| RECEIVER ID | R0001 |
| LAST MODIFICATION DATE | 2000/12/20 |

CUSTOMER DB (CONTRACT INFORMATION)

2054502-0450401

# FIG. 19

| ATTRIBUTE NAME | ATTRIBUTE VALUE |
|---|---|
| FAMILY CUSTOMER ID | U00001-01 |
| CUSTOMER ID | U00001 |
| NAME | TARO TANAKA |
| BIRTH DATE | 1970/03/01 |
| OCCUPATION | EMPLOYEE |
| WORK PLACE | TRADING COMPANY |
| E-mail address | taro@tanaka.ne.jp |
| HOBBY | SPORTS WATCHING |
| LAST MODIFICATION DATE | 2000/12/20 |

CUSTOMER DB (PERSONAL INFORMATION)

EPO - DG 1 05.04.2002 14:50:34

# FIG. 20

| ATTRIBUTE NAME | ATTRIBUTE VALUE |
|---|---|
| RECEIVER ID | R0001 |
| MANUFACTURER NAME | "ASAHI" ELECTRIC CORPORATION |
| MODEL NUMBER | A-TU001 |
| PRODUCT NUMBER | A000001 |
| STORAGE CAPACITY | 30GB |
| CUSTOMER ID | U00001 |
| LAST MODIFICATION DATE | 2000/12/20 |

RECEIVE DB

2054504-3050704

# FIG. 21

| ATTRIBUTE NAME | ATTRIBUTE VALUE |
|---|---|
| INFORMATION PROVIDER ID | IP00001 |
| CONTRACT NUMBER | KB00001 |
| CONTRACT DATE | 2001/01/01 |
| CONTENTS PROVISION START DATE | 2001/01/01 |
| CONTENTS PROVISION END DATE | 2001/01/01 13:00 |
| CONTRACTOR NAME | "AB" PUBLISHING COMPANY |
| ZIP CODE | 111-0011 |
| ADDRESS | 1-1-1, EDO, EDOGAWA-KU, TOKYO |
| TELEPHONE NUMBER | 03-3333-3333 |
| CONTENTS PROVISION FORM | NETWORK |
| CONTENTS PROVISION TIMING | 13:00 EVERY DAY |
| USER INFORMATION PROVISION | PROVIDED |
| USER INFORMATION PROVISION FORM | NETWORK |
| USER INFORMATION PROVISION CONTENTS | ACCESS COUNT |
| LAST MODIFICATION DATE | 2000/12/20 |

INFORMATION PROVIDER DB

2557.0305.0404

# FIG. 22

| ATTRIBUTE NAME | ATTRIBUTE VALUE |
|---|---|
| USER INFORMATION | R0001 |
| INFORMATION FORMAT | COUNT |
| COUNT START TIME | 2001/01/01 00:00 |
| COUNT END TIME | 2001/01/02 00:05 |
| TARGET USER | ALL |
| URI | http://ab.co.jp/index.html |
| COUNT VALUE | 300 |
| LAST UPDATE DATE | 2001/01/02 00:05 |

USER INFORMATION DB

20070104.0545.4

# FIG. 23

| ATTRIBUTE NAME | ATTRIBUTE VALUE |
|---|---|
| USER INFORMATION | R0002 |
| INFORMATION FORMAT | TRANSITION |
| COUNT START TIME | 2001/01/01 00:00 |
| COUNT END TIME | 2001/01/02 00:05 |
| TARGET USER | ALL |
| IMMEDIATELY PRECEDING URI | http://cd.co.jp/link/index.html |
| URI | http://ab.co.jp/index.html |
| COUNT VALUE | 20 |
| LAST UPDATE DATE | 2001/01/02 00:05 |

USER INFORMATION DB(2)

JP02003345908A

# FIG. 24

| ATTRIBUTE NAME | ATTRIBUTE VALUE |
|---|---|
| FAMILY CUSTOMER ID | U00001-01 |
| CONTRACT NUMBER | KC00011 |
| CENTER PROCESSING | OK |
| CENTER SPECIFIC DATA | NO |
| CENTER COMPILED DATA | YES |
| DISCLOSURE TO THIRD PARTIES | YES |
| DISCLOSURE OF SPECIFIC DATA TO THIRD PARTIES | NO |
| DISCLOSURE OF COMPILED DATA TO THIRD PARTIES | YES |
| DISCLOSURE START TIME | 2001/01/01 00:00 |
| DISCLOSURE END TIME | 2001/01/31 00:00 |
| DATA EFFECTIVENESS END TIME | 2001/02/28 00:00 |
| DISCLOSURE OF PERSONAL DATA TO THIRD PARTIES | NO |
| DISCLOSURE CONTENTS OF PERSONAL DATA TO THIRD PARTIES | |
| LAST UPDATE TIME | 2001/01/02 00:05 |

PERSONAL INFORMATION PROVISION INFORMATION

EP 1 345 150 A2

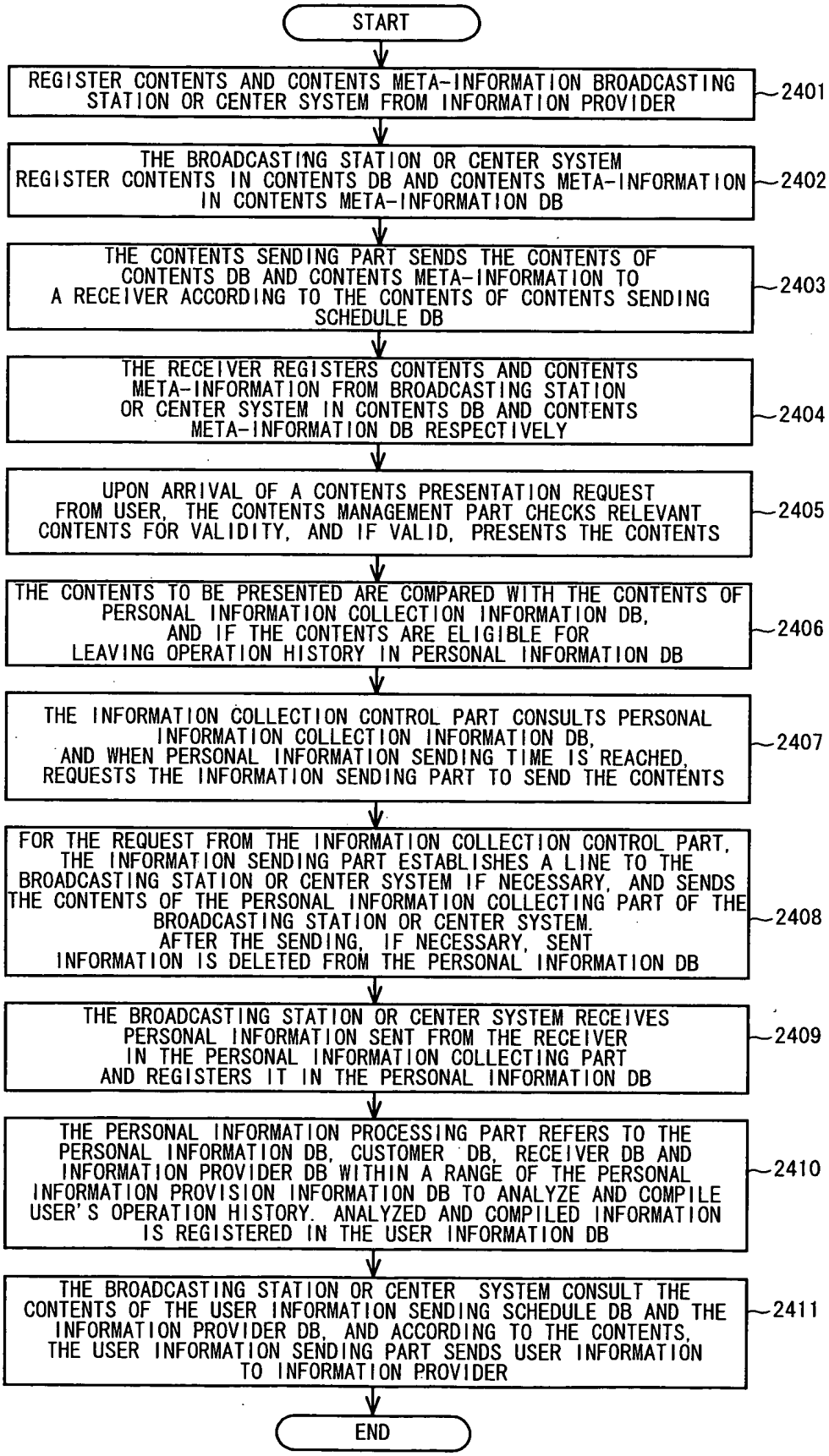
# FIG. 25

| ATTRIBUTE NAME | ATTRIBUTE VALUE |
|---|---|
| FAMILY CUSTOMER ID | U00001-01 |
| CONTRACT NUMBER | KC00011 |
| DATA TARGET START TIME | 2001/01/01 00:00 |
| DATA TARGET END TIME | 2001/01/15 00:00 |
| NUMBER OF DISCLOSURES TO THIRD | 10 |
| LAST UPDATE TIME | 2001/01/02 00:05 |

PERSONAL INFORMATION PROVISION STATUS INFORMATION

2004-0345502

FIG. 26


START
REGISTER CONTENTS AND CONTENTS META-INFORMATION BROADCASTING STATION OR CENTER SYSTEM FROM INFORMATION PROVIDER
2401
THE BROADCASTING STATION OR CENTER SYSTEM REGISTER CONTENTS IN CONTENTS DB AND CONTENTS META-INFORMATION IN CONTENTS META-INFORMATION DB
2402
THE CONTENTS SENDING PART SENDS THE CONTENTS OF CONTENTS DB AND CONTENTS META-INFORMATION TO A RECEIVER ACCORDING TO THE CONTENTS OF CONTENTS SENDING SCHEDULE DB
2403
THE RECEIVER REGISTERS CONTENTS AND CONTENTS META-INFORMATION FROM BROADCASTING STATION OR CENTER SYSTEM IN CONTENTS DB AND CONTENTS META-INFORMATION DB RESPECTIVELY
2404
UPON ARRIVAL OF A CONTENTS PRESENTATION REQUEST FROM USER, THE CONTENTS MANAGEMENT PART CHECKS RELEVANT CONTENTS FOR VALIDITY, AND IF VALID, PRESENTS THE CONTENTS
2405
THE CONTENTS TO BE PRESENTED ARE COMPARED WITH THE CONTENTS OF PERSONAL INFORMATION COLLECTION INFORMATION DB, AND IF THE CONTENTS ARE ELIGIBLE FOR LEAVING OPERATION HISTORY IN PERSONAL INFORMATION DB
2406
THE INFORMATION COLLECTION CONTROL PART CONSULTS PERSONAL INFORMATION COLLECTION INFORMATION DB, AND WHEN PERSONAL INFORMATION SENDING TIME IS REACHED, REQUESTS THE INFORMATION SENDING PART TO SEND THE CONTENTS
2407
FOR THE REQUEST FROM THE INFORMATION COLLECTION CONTROL PART, THE INFORMATION SENDING PART ESTABLISHES A LINE TO THE BROADCASTING STATION OR CENTER SYSTEM IF NECESSARY, AND SENDS THE CONTENTS OF THE PERSONAL INFORMATION COLLECTING PART OF THE BROADCASTING STATION OR CENTER SYSTEM. AFTER THE SENDING, IF NECESSARY, SENT INFORMATION IS DELETED FROM THE PERSONAL INFORMATION DB
2408
THE BROADCASTING STATION OR CENTER SYSTEM RECEIVES PERSONAL INFORMATION SENT FROM THE RECEIVER IN THE PERSONAL INFORMATION COLLECTING PART AND REGISTERS IT IN THE PERSONAL INFORMATION DB
2409
THE PERSONAL INFORMATION PROCESSING PART REFERS TO THE PERSONAL INFORMATION DB, CUSTOMER DB, RECEIVER DB AND INFORMATION PROVIDER DB WITHIN A RANGE OF THE PERSONAL INFORMATION PROVISION INFORMATION DB TO ANALYZE AND COMPILE USER'S OPERATION HISTORY. ANALYZED AND COMPILED INFORMATION IS REGISTERED IN THE USER INFORMATION DB
2410
THE BROADCASTING STATION OR CENTER SYSTEM CONSULT THE CONTENTS OF THE USER INFORMATION SENDING SCHEDULE DB AND THE INFORMATION PROVIDER DB, AND ACCORDING TO THE CONTENTS, THE USER INFORMATION SENDING PART SENDS USER INFORMATION TO INFORMATION PROVIDER
2411
END